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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/170,336	10/13/1998	JOHN STUART BEETESON	UK9-98-026	6676

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EXAMINER

NGUYEN, KEVIN M

ART UNIT	PAPER NUMBER
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2674

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DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/170,336

Applicant(s)

BEETESON ET AL.

Examiner

Kevin M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. In view of the appeal brief filed on 5/16/2003, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Sanou et al (US 6,121,942).

As to claim 1, Sanou et al teach the field emission display FED which includes a cathode means; a row-directional wiring "Dx1 to Dx_m", a column directional wiring "Dy1

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to Dyn", a multi-election beam source having cathode devices arrayed with the simple matrix wiring "Dx1 to Dxm" and "Dy1 to Dyn"; providing the black level $V_{a'}/V_a$ and corrected voltage $V_{a'}$ to one of a row plurality of parallel conductors Dx1 to Dxm (see figure 24, column 29, lines 1-23).

As to claim 2, Sanou et al teach providing a gain correction voltage 87 to a one of the row plurality of parallel conductors Dx1 to Dxm (see figure 24).

As to claim 3, Sanou et al teach a memory 85 for storing a correction value table 3 (see figure 24).

As to claim 4, Sanou et al teach the screen having a flourerecent substance (see column 28, line 16).

As to claim 5, Sanou et al teach providing the corrected voltage $V_{a'}$ and the gain correction voltage 87 to all row plurality of parallel conductors Dx1 to Dxm (see figure 24, column 29, lines 1-23).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sanou et al in view of Nakamura et al (previous cited reference, US 5,818,403).

As to claim 6, Sanou et al teach all of the claimed limitation of claim 1, except for "the cut-off and gain correction information is chosen so as to compensate for variations

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in cut-off and gain occurring during warm up." However, Nakamura et al teach the types of the electron-emitting devices are not specially limited, but cold cathode type display devices are preferred. The hot cathode is affected by temperature distribution (see column 7, lines 25-33). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the hot cathodes being affected by temperature distribution taught by Nakamura et al for Sanou et al's display device because this would obtain an image with high fineness, high sharpness, and high contrast (column 2, lines 51-52 of Nakamura et al).

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sanou et al in view of Nakamura et al, and further in view of Applicant Admitted Prior Art hereinafter AAPA.

As to claim 7, Sanou et al and Nakamura et al teach all of the claimed limitation of claim 1, except for "anode means comprising a plurality of anodes extending parallel to the column conductors, the anode means comprising pairs of anodes each corresponding to a different column conductor, each pair comprising first and second anodes respectively extending along opposite sides of the corresponding column conductor, the first anode being interconnected and the second anodes being interconnected." However, AAPA reviews in the background of the invention that the anodes of each pair extend along opposite sides of the corresponding column of pixel wells 70. Each pixel well 70 is situated at the intersection of a different combination of a grid conductor and a column grid conductor (see page 1, lines 27-29, page 2, lines 3-6). It would have been obvious to a person of ordinary skill in the art at the time of the

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invention to utilize the anodes of each pair extend along opposite sides of the corresponding column of pixel wells 70. Each pixel well 70 is situated at the intersection of a different combination of a grid conductor and a column grid conductor taught by AAPA for Sanou et al' and Nakamura's electron-emitting device because this would operate the electrons being released from the cathode and attracted towards the anode to hit the phosphor surface.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sanou et al in view of Nakamura et al, and further in view of Sakamoto (US 5,594,463).

As to claim 8, Sanou et al and Nakamura et al teach all of the claimed limitation of claim 1, except for temperature sensor. However, Sakamoto teaches a related electron-emitting device which includes a temperature sensor 80 (see figure 5). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the temperature sensor 80 taught by Sakamoto for Sanou et al's and Nakamura et al's electron-emitting device because this would maintain a luminance of the display element constant in correspondence with the detection signal from the detection device (column 2, lines 55-57 of Sakamoto).

8. Claims 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Sanou et al (US 6,121,942) in view of Dunham (previous cited reference, US 5,262,698).

As to claims 9-11, Sanou et al teach all of the claimed limitation of claim 1, except for "cut-off and gain correction information varying according to the physical location of each of said first plurality of parallel conductors and according to which of said second plurality of parallel conductors is selected." However, Dunham teaches a

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related electron-emitting device which includes an adjustable voltage driver 102, 104 coupling to a voltage source providing the V_{REF} voltage rails on both row and column drivers 90 and 86 in order to properly select and maintain values of V_{ROW} and V_{REF} (see figure 4, column 9, lines 28-31). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the adjustable voltage driver 104 coupling to a voltage source providing the V_{REF} voltage rails on column drivers 86 taught by Dunham for Sanou et al's electron-emitting device because this would provide the desired levels of electron beam current (column 9, line 34 of Dunham).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on MON-THU from 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reached on **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Patent Examiner
Art Unit 2674

KN
August 28, 2003

A handwritten signature in black ink, appearing to read 'Richard Hjerpe', is positioned above the printed name and title.

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600